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International Specialists in the Environment
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June 4, 2010

Jeffry Rodin, On-Scene Coordinator
United States Environmental Protection Agency, Region 10
1200 Sixth Avenue, ECL-116
Seattle, Washington 98102

RE: Contract No. EP-S7-06-02; Technical Direction Document No. 10-04-0010
Site-Specific Sampling Plan
Rainier Commons PCB, Seattle, Washington

Dear Mr. Rodin:

Enclosed please find the final Site-Specific Sampling Plan for the Rainier Commons PCB site. If you have any further questions or comments, please contact me at (206) 920-1739.

Sincerely,

ECOLOGY AND ENVIRONMENT, INC.

for

Steven G. Hall
START-3 Project Leader

enclosure

cc: Kathy Parker, EPA, On-Scene Coordinator, Seattle, WA
Bryan Vasser, START-3 Project Manager, Seattle, WA

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION 10
1200 Sixth Avenue, Suite 900
Seattle, Washington 98101-3140

OFFICE OF ENVIRONMENTAL CLEANUP
EMERGENCY MANAGEMENT PROGRAM

Site Specific Sampling Plan

Project Name: Rainier Commons PCB Site ID: 10ZZ

Author: Bryan Vasser Company: Ecology and Environment Inc. Date Completed: 05/19/2010

This Site Specific Sampling Plan (SSSP) is prepared and used in conjunction with the Quality Assurance Plan (QAP) for the Emergency Response Unit for collecting samples during this Removal Program project. The information contained herein is based on the information available at the time of preparation. As better information becomes available, this SSSP will be adjusted.

When inadequate time is available for preparing the SSSP in advance of the sampling event, a Field Sampling Form may be prepared on-site immediately prior to sampling. This full length version of the SSSP is written after the sampling event and the completed Field Sampling Form attached to it.

1. Approvals

Name, Title	Telephone, Email, Address	Signature
Jeffry Rodin **On-Scene Coordinator**	206-553-6709; rodin.jeffry@epa.gov USEPA , M/S: ECL-116, 1200 Sixth Ave Suite 900, Seattle, WA 98101	
Kathy Parker **ERU Quality Assurance Coordinator**	206-553-0062, parker.kathy@epa.gov USEPA , M/S: ECL-116, 1200 Sixth Ave. Suite 900, Seattle, WA 98101	

I. Project Management and Organization

2. Personnel and Roles involved in the project:

Name	Telephone, Email, Company, Address	Project Role	Data Recipient
Jeffry Rodin	206-553-6709; rodin.jeffry@epa.gov USEPA , M/S: ECL-116, 1200 Sixth Ave Suite 900, Seattle, WA 98101	On Scene Coordinator (OSC)	Yes
Bryan Vasser	206-624-9537; bvasser@ene.com Ecology and Environment, 720 Third Avenue, Suite 1700, Seattle, WA 98104	Author of SSSP, START Project Manager	Yes
Kathy Parker	206 553-0062, parker.kathy@epa.gov USEPA , M/S: ECL-116, 1200 Sixth Ave. Suite 900, Seattle, WA 98101	ERU Quality Assurance Coordinator	No
Mark Woodke	206-624-9537, mwoodke@ene.com Ecology and Environment, 720 Third Avenue, Suite 1700, Seattle, WA 98104	START Quality Assurance Reviewer	Yes

Terri Torres	253-922-2310; Terri.torres@testamericainc.com Test America – Tacoma 5755 8th St. East Tacoma, WA 98424	Laboratory contact	No

3. Physical Description and Site Contact Information:

Site Name	Rainier Commons PCB	
Site Location	3100 Airport Way, Seattle, WA 98134	
Property Size	Multiple buildings on a lot the approximate size of a city block	
Site Contact	Eitan Atan	**Phone Number:** Unknown
Nearest Residents	On site	**Direction:** N/A
Primary Land Uses Surrounding the Site	Industrial, commercial	

4. The proposed schedule of project work follows:

Activity	Estimated Start Date	Estimated Completion Date	Comments
SSSP Review/Approval	May 3, 2010	May 24, 2010	
Mobilize to / Demobilize from Site	June 5, 2010	June 9, 2010	
Sample Collection	June 5, 2010	June 9, 2010	
Laboratory Sample Receipt	June 9, 2010	June 9, 2010	
Laboratory Analysis	June 12, 2010	June 26, 2010	A two week turn around time is requested to allow faster assessment of risk to the on-site residents
Data Validation	June 26, 2010	July 14, 2010	

5. Historical and Background Information

Describe briefly what you know about the site that is relevant to sampling and analysis for this investigation.

Most of the buildings at the site were built in the 1890's. The facility operated as a brewery until 1999. Renovation has occurred at the site in the recent years to convert the buildings from industrial to commercial and residential use, but there are still original walls with polychlorinated biphenyl (PCB)-contaminated paint exposed to the interior ambient air. The site has office space and artist lofts with contaminated wall paint. Several sampling events have occurred previously at the site showing PCBs in the paint on both the interior walls and exterior walls. The interior walls will be the focus of this investigation under the EPA ERU CERCLA authority. The exterior walls will be investigated separately.

6. Conceptual Site Model

Example: Contaminant: Mercury
Transport Mechanism: vapor moving on air currents
Receptors: people living in the house

Contaminants: PCBs.
Transport Mechanisms: PCB-contaminated dust, air, and building materials.
Receptors: People living or working in the buildings

7. Decision Statement

Examples: 1) Determine whether surface contamination exceeds the established action level;
2) Determine appropriate disposal options for contaminated materials.

The decision(s) to be made from this investigation is/are to:

1) Determine whether PCB concentration in interior paint exceeds TSCA action level for removal.

2) Determine whether PCB concentrations in indoor ambient air or dust exceed the established action level.

3) Determine if brick, plaster or concrete underneath the paint has PCB contamination.

4) Determine if wipe sample locations have PCB contamination.

8. Action Level

State the analyte, concentration, and units for each selected action level. Describe the rationale for choosing each action level and its source (i.e. MTCA, PRG, ATSDR, etc.) Example: The action level for total mercury in soil is 6.7 mg/kg (from Regional Screening Level residential).

The following levels were provided to the ERU by an EPA risk assessor, desired RBACGs

1. Air

Analytical methods that can quantify PCB concentrations of 0.01 $\mu g/m^3$ or lower should insure that risks in the 10^{-6} range can be determined. If possible, a slightly lower reporting limit would be desirable.

2. Paint

This action level will be determined by the EPA risk assessor with consideration of the TSCA removal level of 50 ppm for PCBs in paint.

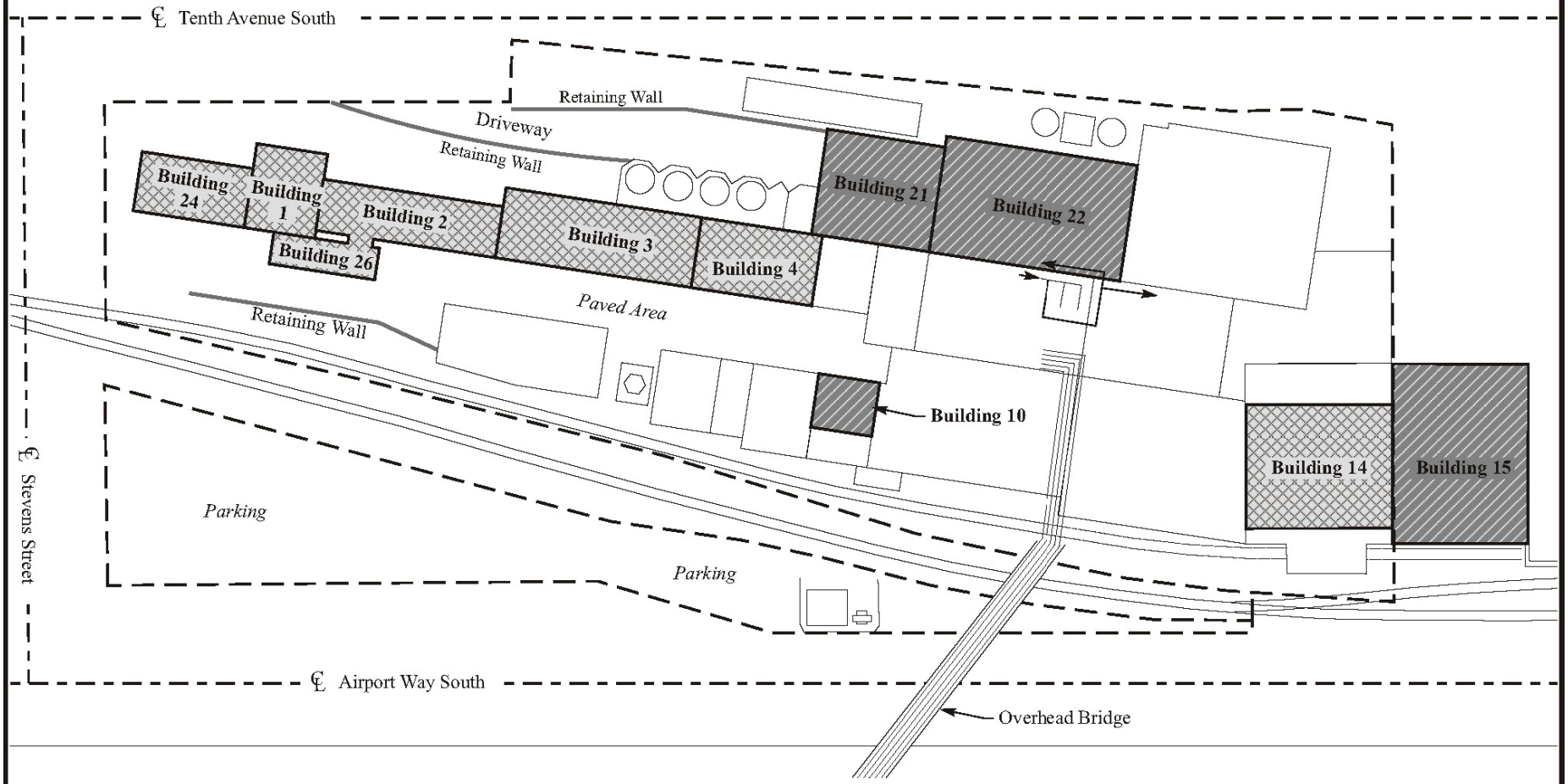
3. Concrete/Brick/Plaster

This action level will be determined by the EPA risk assessor.

II. Data Acquisition and Measurement Objectives

9. Site Diagram and Sampling Areas

A Sampling Area is an area within in which a specific action will be performed.
Examples : 1) Each drum on the site is a Sampling Area;
2) Each section of sidewalk in front of the residence is a Sampling Area;
3) Each sampling grid section is a Sampling Area.



ecology and environment, inc. International Specialists in the Environment Seattle, Washington	RAINIER COMMONS PCB Seattle, Washington	Figure 1 SITE MAP		
	Not to Scale	Date: 5/4/10	Drawn by: AES	10:START-3\10040010\fig 1

10. The Decision Rules

These can be written as logical If…, Then.. statements. Describe how the decisions will be made and how to address results falling within the error range of the action level. Examples: 1) In the Old Furnace Sampling Area, the soil in the area around the furnace structure will be excavated until sample analysis with XRF shows no mercury concentrations in surface soil above the lower limit of the error associated with the action level, 18.4 mg/kg. 2) If the concentrations of contaminants in a SA are less than the lower limit of the error associated with the action level, then the area may be characterized as not posing an unacceptable risk to human health or the environment and may be dismissed from additional RP activities. The area may be referred to other Federal, State or Local government agencies.

The following statement(s) describe the decision rules to apply to this investigation:

1. If PCBs a Sampling Area exceed action levels, further investigation or action may be taken.
2. If PCBs in all Sampling Areas do not exceed action levels, a determination of no further action may be made.

11. Information Needed for the Decision Rule

What information needs to be collected to make the decisions – this includes non-sampling info as well: action levels, climate history, direction of water flow, etc. Examples: Current and future on-site and off-site land use; wind direction, humidity and ambient temperature; contaminant concentrations in surface soil.

The following inputs to the decision are necessary to interpret the analytical results:

1. Occupancy status of each loft area
2. Age of exposed people
3. PCB concentrations in the paint, air, dust, wipe, and concrete/brick matrices
4. Risk-based action levels from EPA risk assessor.

12. Sampling and Analysis

For each SA, describe:

1. *sampling pattern (random, targeted, scheme for composite)*
2. *number of samples, how many to be collected from where, and why*
3. *sample type (grab, composite)*
4. *matrix (air, water, soil)*
5. *analytes and analytical methods*
6. *name and locations of off-site laboratories, if applicable.*

One grab targeted paint chip sample and one grab targeted concrete/brick/plaster sample from underneath contaminated paint will be collected from each sampled residence as described in Table 2 below (locations will be determined by the EPA OSC) and will be analyzed for PCBs following EPA Method 8082.

One composite targeted air sample will be collected from each sampled residence and will be analyzed for PCBs following EPA Method TO-4A.

All analyses will be performed by Test America, Inc.

13. Applicability of Data (place an X in front of the data categories needed, explain with comments)

Do the decisions to be made from the data require that the analytical data be:
1) definitive data, 2) screening data (with definitive confirmation) or 3) screening data (without definitive confirmation)?

*_X__**A) Definitive data** is analytical data of sufficient quality for final decision-making. To produce definitive data on-site or off-site, the field or lab analysis will have passed full Quality Control (QC) requirements (continuing calibration checks, Method Detection Limit (MDL) study, field duplicate samples, field blank, matrix spikes, lab duplicate samples, and other method-specific QC such as surrogates) AND the analyst will have passed a Precision and Recovery (PAR) study AND the instrument will have a valid Performance Evaluation sample on file. This category of data is suitable for: **1) enforcement purposes, 2) determination of extent of contamination, 3) disposal, 4) RP verification or 5) cleanup confirmation.***
Comments: Definitive Data is required when making human health decisions or risk-based evaluations.

*___**B) Screening data with definitive confirmation** is analytical data that may be used **to support preliminary or intermediate decision-making** until confirmed by definitive data. However, even after confirmation, this data is often not as precise as definitive data. To produce this category of data, the analyst will have passed a PAR study to determine analytical error AND 10% of the samples are split and analyzed by a method that produced definitive data with a minimum of three samples above the action level and three samples below it.*

*___**C) Screening data** is analytical data which has not been confirmed by definitive data. The QC requirements are limited to an MDL study and continuing calibration checks. This data can be used for making decisions: **1) in emergencies, 2) for***

health and safety screening, 3) to supplement other analytical data, 4) to determine where to collect samples, 5) for waste profiling, and 6) for preliminary identification of pollutants*. This data is not of sufficient quality for final decision-making.*

14. Special Sampling or Analysis Directions

Describe any special directions for the planned sampling and analysis such as additional quality controls or sample preparation issues. Examples: 1) XRF and Lumex for sediment will be calibrated before each day of use and checked with a second source standard. 2) A field blank will be analyzed with each calibration to confirm the concentration of non-detection. 3) A Method Detection Limit determination will be performed prior to the start of analysis so that the lower quantitation limit can be determined. 4) If particle size is too large for accurate analyses, the samples will be ground prior to analysis. If the sample contains too much moisture for accurate analyses, the sample will be decanted and air dried prior to analysis.

1. Residents may asked to start and stop the air sampler based in their residence in order to limit the disturbance. They will be asked to record the each start/stop time and those times will be totaled to acquire a total volume of the air sample.
2. Air samples will be collected for a time period of 24 to 48 hours, total depending on the flow rate, in order to obtain the desired detection limit.

15. Method Requirements

[Describe the restrictions to be considered in choosing an analytical method due to the need to meet specific regulations, policies, ARARs, and other analytical needs. Examples: 1) Methods must meet USEPA Drinking Water Program requirements. 2) Methods must achieve lower quantitation limits of less than 1/10 the action levels.3) Methods must be performed exactly as written without modification by the analytical laboratory.]

Methods must achieve a lower quantitation limit below the action level.
Samples of brick or concrete may require crushing at the lab prior to extraction and analysis.

16. Sample Collection Information

[Describe any activities that will be performed related to sample collection]

The applicable sample collection Standard Operating Procedures (SOPs) or methods will be followed and include:

Field Activity Logbook
Sample Packaging and Shipping
Sampling Equipment Decontamination
Wipe Sampling
Biological Sampling – Vacuum Sampling, modified for the PCB method
Instrument SOPs:

17. Optimization of Sampling Plan (Maximizing Data Quality While Minimizing Time and Cost)

[Describe what choices were made to reduce cost of sampling while meeting the needed level of data quality. Example: The XRF will be used in situ whenever possible to achieve accurate results. Reproducibility and accuracy of in situ XRF analyses will be checked by collecting, air drying, analyzing and comparing five in situ samples at the start of sampling. Where interferences are suspected, steps will be taken to eliminate the interferences by mechanisms such as drying, grinding or sieving the samples or analyzing them using the Lumex with soil attachment.]

Residents will be asked to start and stop the air sampler based in their residence which will reduce the amount of time and cost for START samplers.

The format for sample number identification is summarized in Table 1. Sample collection and analysis information is summarized in Tables 2 and 3. Table 4 contains general sample collection information.

Table 1
SAMPLE CODING

Project Name ___Rainier Commons PCB_____ Site ID:___10ZZ_____

SAMPLE NUMBER [(1)]		
Digits	**Description**	**Code (Example)**
1,2,3,4	Year and Month Code	YYMM (1006)
5,6,7,8	Consecutive Sample Number (grouped by SA as appropriate)	0001 – First sample of SA

SAMPLE NAME / LOCATION ID [(2)] ***(Optional)***		
1,2	Sampling Area	BN – Building Number
3,4	The Building Number	01 to 22
5,6	Matrix Code	AR – Air BR – Brick CT - Concrete DS - Dust PL - Plaster PT – Paint QC – Quality Control WP – Wipe
7,8	Consecutive location number	Starts at 01

Notes:
(1) The Sample Number is a unique, 8-digit number assigned to each sample.
(2) The Sample Name or Location ID is an optional identifier that can be used to further describe each sample or sample location.

Table 2 Proposed Samples

Sample Number	Location ID	Site Location	Paint Sample	Particulate/PUF Air Sample	Brick/Mortar Sample	Plaster sample
10060001	BN01??01	First floor	1	1	0	0
10060002	BN01??02	Second floor	1	1	0	0
10060003	BN 02??01	First floor conference room	1	1	0	0
10060004	BN03??01	First floor Bar	1	1	0	0
10060005	BN04??01	First floor conference room	1	1	0	0
10060006	BN24??01	First floor	1	1	0	0
10060007	BN24??02	Second floor	1	1	0	0
10060008	BN14??01	Main Storage Area	1	1	1	1
10060009	BN14??02	Equipment Room	1	1	0	0
10060010	BN26??01	Lobby area	1	1	0	0
10060011/10060012	BN10??01	Exposed Brick and Original Wall in Building 10	2	1	1	1
10060013	BN22??01	Workshop on First Floor	1	1	0	0
10060014	BN22??02	Stairwell with previously exterior wall	1	1	1	0
10060015	BN22??03	Residential Unit on 4th floor	1	1	0	0
10060016	BN21??01	Residential Unit on 5th Floor	1	1	0	0
10060017	BN21??02	Unit with young child	1	1	0	0
10060018	BN07??01	Gathering room for Groove Universe	1	1	1	1
10060019	BN15??01	First floor underneath loft	1	1	1	1
Total			**19**	**18**	**5**	**4**

Table 3. Sampling and Analysis

Data Quality	Sampling Area	Matrix	Sampling Pattern	Sample Type	Data Quality	Number of Field Samples	Analyte or Parameter	Method Number	Action Level	Method Quant. Limit	#/type of Sample Containers per Sample	Preservative (< 6°C)	Hold Time	Field QC
Lab Analysis	All Decision Areas	PUF/Particulates in Air	Targeted	Grab	Definitive	18	PCBs	TO-4a	.01 ug/m^3	0.001 ug/m^3	1 filter	N/A	7 days to extraction; 40 days to analysis	1 Field Blank 1 Field Duplicate
Lab Analysis	All Decision Areas	Brick/Concrete/Plaster	Targeted	Grab	Definitive	5/5/4	PCBs	EPA 8082a	See Action Level section above	0.01 mg/kg	1x8 oz jar With >10 g solid	N/A	14 days to extraction; 40 days to analysis	1 Field Duplicate per matrix
Lab Analysis	All Decision Areas	Paint	Targeted	Grab	Definitive	19	PCBs	EPA 8082a	50 ppm	0.5 mg/kg	1x8 oz jar With >.2 g paint	N/A	14 days to extraction; 40 days to analysis	1 Field Duplicate

Note: For matrix spike and/or duplicate samples, no extra volume is required for air (unless co-located samples are collected), oil, product, or soil samples except soil VOC or NWTPH-Gx samples (triple volume). Triple volume is also required for organic water samples (double volume for inorganic).

Table 4. Common Sample Handling Information

Analysis Type	Sub Analysis	Matrix	Analytical Method	Container Type	Minimum Volume	Preservative	Temperature/ Storage	Hold Time	Source
Metals	Metals Not including Mercury or Hexachrome. Includes TAL, PP, RCRA lists)	Solid	EPA 6000 / 7000 Series	Glass Jar	200 g	n/a	None	6 months	SW-846 ch. 3
		Aqueous	EPA 6000 / 7000 Series	PTFE or HDPE	600 mL	HNO_3 to pH < 2	Not listed	6 months	SW-846 ch. 3
	Mercury	Solid	EPA 7471B	Glass Jar	200 g	n/a	≤ 6° C	28 days	SW-846 ch. 3
		Aqueous	EPA 7470A	PTFE or HDPE	400 mL	HNO_3 to pH < 2	Not listed	28 days	SW-846 ch. 3
	Hexavalent Chromium, (Hexachrome, Cr+6)	Solid	Lab-specific soil extraction modification, EPA 7196A	Glass Jar	100 g	n/a	≤ 6° C	28 days to extraction	SW-846 ch. 3
		Aqueous	EPA 218.6 (Drinking Water)	PTFE or HDPE	400 mL	n/a	≤ 6° C	24 hours	SW-846 ch. 3
	XRF	Solid (in situ; on the ground surface)	6200	none	n/a	none	none	Analyze Immediately	n/a
		Solid (ex situ)	6200	plastic bag	200 g	none	none	6 months	n/a
VOCs	VOCs / BTEX	Solid	EPA 5035 / 8260B	*	*	*	*	2 days to lab / 14 days	SW-846 ch. 4
		Aqueous	EPA 8260B	Amber Vial with Septa Lid	2 x 40 mL	HCl to pH< 2	≤ 6° C (headspace free)	14 days	SW-846 ch. 4
SVOCs	SVOCs / PAHs	Solid	EPA 8270D	Glass Jar	8 ounces	n/a	≤ 6° C	14 days	SW-846 ch. 4
		Aqueous	EPA 8270D	Amber Glass	2 x 1 L	n/a	≤ 6° C	7 days	SW-846 ch. 4
PCBs and Dioxins/Furans	PCBs	Solid	EPA 8082	Glass Jar	8 ounces	n/a	≤ 6° C	none	SW-846 ch. 4
		Aqueous	EPA 8082	Amber Glass	2 x 1 L	n/a	≤ 6° C	none	SW-846 ch. 4
	Dioxins/Furans	Solid	EPA 8280 or 8290	Glass Jar	8 ounces	n/a	≤ 6° C	none	SW-846 ch. 4
		Aqueous	EPA 8280 or 8290	Amber Glass	2 x 1 L	n/a	≤ 6° C	none	SW-846 ch. 4
Pesticides and Herbicides	Chlorinated Pesticides	Solid	EPA 8081	Glass Jar	8 ounces	n/a	≤ 6° C	14 days	SW-846 ch. 4
		Aqueous	EPA 8081	Amber Glass	2 x 1 L	n/a	≤ 6° C	7 days	SW-846 ch. 4
	Chlorinated Herbicides	Solid	EPA 8151	Glass Jar	8 ounces	n/a	≤ 6° C	14 days	SW-846 ch. 4
		Aqueous	EPA 8151	Amber Glass	2 x 1 L	n/a	≤ 6° C	7 days	SW-846 ch. 4
NWTPH	Gasoline-Range Organics	Solid	TPHs/NWTPH-Gx	Amber Glass Jar with Septa Lid	4 ounces	n/a	≤ 6° C (headspace free)	14 days	Method
		Aqueous	TPHs/NWTPH-Gx	Amber Vial with Septa Lid	2 x 40 mL	pH < 2 with HCl	≤ 6° C (headspace free)	7 days unpreserved 14 days preserved	Method
	Diesel-Range Organics	Solid	3510, 3540/3550, 8000	Glass Jar	8 ounces	n/a	≤ 6° C	14 days	Method
		Aqueous	3510, 3540/3550, 8000	Glass Amber	2 x 1 L	pH < 2 with HCl	≤ 6° C	7 days unpreserved 14 days preserved	Method

Analysis Type	Sub Analysis	Matrix	Analytical Method	Container Type	Minimum Volume	Preservative	Temperature/ Storage	Hold Time	Source
Geotechnical	Particle Size Analysis	Solid	ASTM D-422	Glass Jar or Plastic Bag	2 x 8 ounce	none	n/a	n/a	Method
Miscellaneous	pH	Solid	EPA 9045	Glass Jar	8 ounces	n/a	n/a	Analyze Immediately	SW-846 ch. 3
		Aqueous	EPA 9040	PTFE	25 mL	n/a	n/a	Analyze Immediately	SW-846 ch. 3
	Total Organic Carbon (TOC)	Solid	SW-846 9060	Glass Jar	100 mL	n/a	$\leq 6^{o}$ C	28 days	SW-846
		Aqueous	EPA 415.1	PTFE or HDPE	200 mL	store in dark HCL or H_2SO_4 to pH <2	$\leq 6^{o}$ C	7 days unpreserved 28 days preserved	Method
	Cyanide	Solid	SW-846 9013	Glass Jar	5 g	n/a	$\leq 6^{o}$ C	14 days	SW-846 ch. 3
		Aqueous	SW-846 9010C	PTFE or HDPE	500 mL	NaOH to pH > 12	$\leq 6^{o}$ C	14 days	SW-846 ch. 3
	Conductivity	Aqueous	EPA 120.1	PTFE or HDPE	100 mL	n/a	n/a	Analyze Immediately	Method
	Hardness	Aqueous	EPA 130.1	PTFE or HDPE	1 x 1 L	HNO3 to pH<2	$\leq 6^{o}$ C	28 days	Method
	Total Suspended Solids	Aqueous	EPA 160.2	PTFE or HDPE	100 mL	n/a	$\leq 6^{o}$ C	7 days	Method
	Total Dissolved Solids	Aqueous	EPA 160.1	PTFE or HDPE	100 mL	n/a	$\leq 6^{o}$ C	7 days	Method
	Nitrate/nitrite	Aqueous	EPA 353.2	PTFE or HDPE	1 x 250 mL	H_2SO_4 to pH <2	$\leq 6^{o}$ C	28 days	Method
	Nitrate	Aqueous	SW-846 9210A	PTFE or HDPE	1,000 mL	n/a	$\leq 6^{o}$ C	28 days	SW-846 ch. 3
	Nitrite	Aqueous	SW-846 9216	PTFE or HDPE	25 mL	n/a	$\leq 6^{o}$ C	48 hours	SW-846 ch. 3, Method
	Fluoride	Aqueous	SW-846 9214	PTFE or HDPE	300 mL	n/a	$\leq 6^{o}$ C	28 days	SW-846 ch. 3
	Chloride	Aqueous	SW-846 9250	PTFE or HDPE	50 mL	n/a	$\leq 6^{o}$ C	28 days	SW-846 ch. 3
	Sulfate	Aqueous	SW-846 9035	PTFE or HDPE	50 mL	n/a	$\leq 6^{o}$ C	28 days	SW-846 ch. 3
	Sulfide	Solid	SW-846 9215	Glass Jar	1 x 4 ounces	Fill sample surface with 2N zinc acetate until moistened.	$\leq 6^{o}$ C (headspace free)	7 days	SW-846 ch. 3
		Aqueous	SW-846 9031	PTFE or HDPE	100 mL	4 drops 2N zinc acetate/100 mL sample; NaOH to pH>9.	$\leq 6^{o}$ C (headspace free)	7 days	SW-846 ch. 3

Key:

* = See individual methods. We typically collect 3xEnCore-type samplers and 1x40 mL VOA vial per sample, keep at $\leq 6^{o}$C with no chemical preservative, and they must be at the lab within 48 hours of collection.

C = Celsius
Cr = chromium
EPA = Environmental Protection Agency
g =grams
H2SO4 = sulfuric acid
HCL = hydrochloric acid
HDPE = high-density polyethylene
Hg = mercury
HNO_3 = nitric acid
L = liter
mL = milliliter
n/a = not applicable
NaOH = sodium hydroxide
PCBs = polychlorinated biphenyls
PTFE = polytetrafluoroethylene
RCRA = Resource Conservation and Recovery Act
SVOCs = semivolatile organic compounds
SW-846 = EPA Test Methods for Evaluating Solid Waste, Physical/Chemical Methods
TAL = Target Analyte List
TPH = total petroleum hydrocarbons
VOA = Volatile Organic Analysis
VOCs = Volatile Organic Compounds

III. Assessment and Response

A Sample Plan Alteration Form (SPAF) will be used to describe project discrepancies (if any) that occur between planned project activities listed in the final SSSP and actual project work. The completed SPAF will be approved by the OSC and QAC and appended to the original SSSP. As this SSSP is being used to support the TSCA program, a SPAF will be used to capture the additional information that would normally appear in a QAPP.

A Field Sampling Form (FSF) may be used to capture the sampling and analysis scheme for emergency responses in the field and then the FSF pages can be inserted into the appropriate areas of the final SSSP.

Corrective actions will be assessed by the sampling team and others involved in the sampling and a corrective action report describing the problem, solution, and recommendations will be forwarded to the OSC and the ERU QAC.

IV. Data Validation and Usability

The sample collection data will be entered into Scribe and Scribe will be used to print lab Chains of Custody. Results of field and lab analyses will be entered into Scribe as they are received and uploaded to Scibe.net when the sampling and analysis has been completed.

18. Data Validation or Verification will be performed by:

ERU's general recommendation on validation is that a minimum of CLP-equivalent stage IIA verification and validation be performed for every SSSP involving laboratory analyses. However, stage IIB is preferred if the lab can provide it. Dioxins should be validated at CLP-equivalent stage 4.

	Data Verification and Validation Stages						
Performed by:	I	IIA	IIB	III	IV	Verification	Other:
E and E QA Reviewer							
TechLaw QA Reviewer							
EPA Region 10 QA Office					100%		
MEL staff							
Other:							